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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,301	11/24/2003	Douglas J. Dellinger	2750-0001.10	7685
23980	7590	09/10/2004	<div>EXAMINER</div> <div>MCINTOSH III, TRAVISS C</div>	
REED & EBERLE LLP 800 MENLO AVENUE, SUITE 210 MENLO PARK, CA 94025			<div>ART UNIT</div> <div>1623</div>	<div>PAPER NUMBER</div>
DATE MAILED: 09/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/721,301

**Applicant(s)**

DELLINGER, DOUGLAS J.

**Examiner**

Traviss C McIntosh

**Art Unit**

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: the claim is missing commas between the various moieties when defining X, on the first line of page 67 (i.e., the claim states: "X is O, S NH or NR<sup>7</sup>..." and should read: "X is O, S, NH, or NR<sup>7</sup>..."). Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

All claims that include the limitation of "substituted", as in "substituted hydrocarbyl" and "substituted heteroatoms-containing hydrocarbyl" as in claims 1, 2, 15, and 16 for example, are indefinite. In the absence of the identity of moieties which are intended to provide substitution and thus modify the instantly claimed chemical core, the identity of the "substituted" moieties applicant intends as the invention would be difficult to ascertain. In the absence of said moieties, the claims containing the term "substituted" are not described sufficiently to distinctly point out that which applicant intends as the invention. Applicants should include the moieties

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which are intended to effectuate substitution into the claims wherein said moieties are supported in the specification as originally filed.

Claims 1, 2, 14, 15, 16, and 24 are indefinite wherein the claims define B as a “nucleobase selected from the group consisting of unprotected and protected purines, pyrimidines, and analogs thereof”. It is unclear as to what the “analogs thereof” is intended to represent and how they are analogous. Are they analogous structurally, functionally, nomenclatorially, etc.? Clarity is respectfully requested.

Claim 1 is additionally indefinite wherein the claim defines D as “O, S, or N” in the third line under the structure of formula III. It is believed that applicants intended D to represent “O, S, or NH”, otherwise, N would have a dangling valence.

All claims which depend from an indefinite claim are also indefinite. *Ex parte Cordova, 10 U.S.P.Q. 2d 1949, 1952 (P.T.O. Bd. App. 1989).*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Köster et al. (US patent 4,725,677), who discloses processes for preparing oligonucleotides which contain a phosphine derivative as the internucleotide linkage wherein the phosphine derivative is taught to be an amino radical containing a primary, secondary, or tertiary alkyl radical which optionally includes a cycloalkyl radical with optional branching which can contain heteroatoms of nitrogen, oxygen, or sulfur (column 2, line 56 – column 3, line 37); and Rudolph et al. (“Phosphonoacetate Derivatives of Oligodeoxyribonucleotides”, Nucleosides and

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Nucleotides, 1996 15(11&12) pages 1725-1739), who teaches a process for preparing oligonucleotides which contain a phosphonoacetate derivative as the internucleotide linkage which comprises a carboxylate group as shown in Figure 1, page 1733.

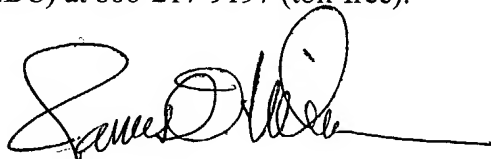
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Traviss C McIntosh whose telephone number is 571-272-0657. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Traviss C. McIntosh III  
September 2, 2004



James O. Wilson  
Supervisory Patent Examiner  
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